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BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

Arizona Corporation Commission

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IN THE MATTER OF THE APPLICATION
OF UNS ELECTRIC, INC. FOR APPROVAL
OF ITS RENEWABLE ENERGY
STANDARD AND TARIFF
IMPLEMENTATION PLAN

DOCKET NO. E-04204A-07-0593

DECISION NO. 70653

ORDER

Open Meeting
December 16 and 17, 2008
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. UNS Electric, Inc. ("UNS" or "Company") is engaged in providing electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission

Background

2. On July 1, 2008, UNS filed its application for approval of its 2009 Renewable Energy Standard and Tariff ("REST") Plan.

3. UNS' application includes two implementations plans, one entitled the Full Compliance Implementation Plan ("Full Compliance") and the other entitled the Best Value Implementation Plan ("Best Value"). UNS' application also includes Full Compliance and Best Value versions of the Renewable Energy Credit Purchase Program ("RECPP"). UNS is also proposing a new Builder Credit Purchase Program and funding for research and development activities.

1 4. Previously, in Decision No. 70315 (April 28, 2008), the Commission approved
2 UNS' REST Plan with 2008 funding levels and other details. UNS had proposed Full Compliance
3 and Sample Tariff plan options for 2008, while the Commission adopted a Staff REST plan that
4 combined certain aspects of the Sample Tariff and Full Compliance plan options.

5 5. The approved plan included a \$0.004988 per kWh rate, and caps of \$2.00, \$39.00,
6 and \$500.00 respectively for residential, commercial (non-residential under 3 megawatts ("MW"),
7 including lighting and public authority) and industrial customers (non-residential greater than or
8 equal to 3 MW). The budget for the approved plan was \$3.15 million for 2008.

9 **A. Proposed Implementation Plans**

10 6. UNS includes two proposed Implementation Plans for consideration by the
11 Commission. For each, UNS includes the resource technology employed, the cost, and a line item
12 budget.

13 Full Compliance Implementation Plan

14 7. The Full Compliance Plan includes activities and costs that UNS believes are
15 required to meet the renewable and distributed energy goals set forth in the REST. The REST
16 renewable energy requirement is 2.00 percent of retail kWh sales in 2009, with 15 percent of that
17 from distributed energy ("DE"), and half of DE from residential sources. The major difference
18 between the Full Compliance Plan and UNS' Best Value Plan is the amount of residential DE.

19 8. UNS estimates the cost of the Full Compliance Plan to be \$6.4 million in 2009.
20 The REST Tariff under Full Compliance Plan is estimated to collect \$6.5 million. The Full
21 Compliance Plan proposed revenue effects are shown in Table 1. The Full Compliance Plan
22 increases the photovoltaic incentive level from current \$3.00 per Watt to \$4.50 per Watt. The Full
23 Compliance Plan would also increase the solar hot water up front subsidy from the current \$750
24 plus \$0.25 per kWh up to \$1,750, to \$1,500 plus \$0.50 per kWh up to \$3,500. The Full
25 Compliance Plan would have a surcharge of \$0.006 per kWh. The monthly caps would be \$7.00
26 for residential customers, \$150.00 for commercial customers, and \$1,900 for industrial customers.

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Table 1 – Full Compliance Plan Customer Impact, Year 2009

Customer Class	Total Revenue	Percent of Revenue	Average Bill	Monthly Cap	Percent of Customers at Cap
Residential	\$3,998,410	60.7%	\$5.98	\$7.00	24.3%
Commercial	\$2,461,646	37.4%	\$124.35	\$150.00	4.7%
Industrial	\$114,600	1.7%	\$1,900.00	\$1,900.00	100.0%
Lighting/PA	\$13,712	0.2%	\$21.07	\$150.00	0.5%
Total	\$6,588,368				

Best Value Plan

9. The Best Value Plan proposes a lower overall cost program than the Full Compliance option by adjusting the DE allocation requirements from the REST rules. Specifically, under the Best Value Plan, of the 15 percent requirement for DE, at least one quarter (3.75 percent of total renewable energy requirement) would be for residential customer-sited applications, at least one quarter (3.75 percent of total requirement) would be for customer-sited non-residential applications, and up to 50 percent (7.5 percent of total requirement) would be for non-residential applications, including wholesale distributed generation. Thus, in comparison to the REST rules requirements, half of the residential customer-sited requirement could be met by customer-sited non-residential applications. So the Best Value Plan falls short of meeting the REST residential DE requirements, but the total renewable energy requirement would be met.

10. UNS estimates the cost of the Best Value Plan to be \$2.9 million in 2009. UNS estimates that it would recover \$3.0 million in 2009 under the Best Value Plan. The proposed revenue effects are shown in Table 2. The Best Value Plan retains the incentive levels approved by the Commission for the 2008 plan, including the \$3.00 per Watt photovoltaic incentive and retention of the 2008 plan customer bill cap levels. The Best Value Plan also retains the existing solar hot water up front subsidy of \$750 plus \$0.25 per kWh up to \$1,750. The monthly caps would be \$2.00 for residential customers, \$39.00 for commercial customers, and \$500 for industrial customers. The Best Value Plan would retain the existing surcharge of \$0.004988 per kWh.

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Table 2 – Best Value Plan Customer Impact, Year 2009

Customer Class	Total Revenue	Percent of Revenue	Average Bill	Monthly Cap	Percent of Customers at Cap
Residential	\$1,641,170	55.3%	\$1.85	\$2.00	71.1%
Commercial	\$1,286,572	43.4%	\$35.74	\$39.00	10.9%
Industrial	\$30,084	1.0%	\$500.00	\$500.00	100.0%
Lighting/PA	\$8,997	0.3%	\$16.02	\$39.00	1.6%
Total	\$2,966,824				

Staff's Proposed Plan

11. Fundamentally, Staff believes that there has not been sufficient experience with the REST Tariff provisions recently approved by the Commission in April 2008 to warrant making major changes to the implementation plan at this time. Therefore, Staff is generally recommending a continuation of the provisions approved by the Commission in 2008, with certain adjustments to recognize the increased REST requirements for 2009. Thus, Staff's recommendation is a compromise between the Full Compliance and Best Value plans, as it was in the proceeding that dealt with UNS' 2008 implementation plan proposals and led to the Commission's April 2008 decision. Staff's Proposed Plan maintains the same incentive levels as were approved for the 2008 plan, but adjusts the customer bill caps upward to reflect the increased spending requirements of the REST rules.

12. Staff's Proposed Plan would cost \$5.0 million in 2009. UNS estimates that it would recover \$4.7 million in 2009 under the Staff Proposed Plan. Staff's Plan continues to use the \$3.00 per Watt photovoltaic incentive with increased monthly customer bill caps. Staff believes that this is a reasonable incentive level, is similar to what is offered in other utilities' REST plans, and should be given further opportunity to attract participants before the higher incentive level contained in UNS' Full Compliance plan is given greater consideration. The Staff Plan also retains the solar water heating up front subsidy of \$750 plus \$0.25 per kWh up to \$1,750. Staff's Proposed Plan would have a surcharge of \$0.006 per kWh. The monthly caps would be \$4.00 for residential customers, \$60.00 for commercial customers, and \$1,000 for industrial customers. Staff sets the residential distributed energy at 7.5 percent of total kWh (50 percent of required DE) and meets REST requirements at a lower cost.

The customer impact of Staff's Plan is shown in Table 3.

Table 3 – Staff Proposed Plan Customer Impact, Year 2009

Customer Class	Total Revenue	Percent of Revenue	Average Bill	Monthly Cap	Percent of Customers at Cap
Residential	\$2,935,101	62.2%	\$3.57	\$4.00	47.0%
Commercial	\$1,716,507	36.4%	\$53.77	\$60.00	9.4%
Industrial	\$57,360	1.2%	\$1,000.00	\$1,000.00	100.0%
Lighting/PA	\$11,381	0.2%	\$16.02	\$60.00	1.2%
Total	\$4,720,350				

B. Tariffs

13. UNS proposes tariffs corresponding to its two proposed Implementation Plans. UNS points out that the proposed Implementation Plan and the associated tariff should become effective simultaneously. Table 4 gives a summary of the proposed rates and caps for the three proposals discussed above. Table 5 shows the cost per month for various customer types based on typical monthly energy use for the three proposals discussed above. Table 6 shows the proposed budgets for the three proposals discussed above.

Table 4
UNS Renewable Energy Programs
REST - Customer Rates and Caps

	<u>UNS Proposed Plans</u>			<u>Staff Proposed Plan</u>
	<u>2008 Approved Plan</u>	<u>Best Value Plan</u>	<u>Full Compliance Plan</u>	
Per kWh Rate	\$0.004988	\$0.004988	\$0.006000	\$0.006000
Residential Cap	\$2.00	\$2.00	\$7.00	\$4.00
Commercial	\$39.00	\$39.00	\$150.00	\$60.00
Industrial	\$500.00	\$500.00	\$1,900.00	\$1,000.00
Lighting/PA	\$39.00	\$39.00	\$150.00	\$60.00

Table 5
UNS Renewable Energy Programs
REST - Customer Type Monthly Surcharge Comparison

<u>Customer Types</u>	<u>kWh / mo.</u>	<u>2008 Approved Plan</u>	<u>Best Value Plan</u>	<u>Full Compliance Plan</u>	<u>Staff Proposed Plan</u>
Low Consuming Residence	400	\$2.00	\$2.00	\$2.40	\$2.40
Avg. Consuming Residence	960	\$2.00	\$2.00	\$5.76	\$4.00
High Use Residence	2,000	\$2.00	\$2.00	\$7.00	\$4.00
Dentist Office	2,000	\$9.98	\$9.98	\$12.00	\$12.00
Hairstylist	3,900	\$19.45	\$19.45	\$23.40	\$23.40
Department Store	170,000	\$39.00	\$39.00	\$150.00	\$60.00
Mall	1,627,100	\$39.00	\$39.00	\$150.00	\$60.00
Retail Video Store	14,400	\$39.00	\$39.00	\$86.40	\$60.00
Large Hotel	1,067,100	\$39.00	\$39.00	\$150.00	\$60.00
Large Building Supply	346,500	\$39.00	\$39.00	\$150.00	\$60.00
Hotel/Motel	27,960	\$39.00	\$39.00	\$150.00	\$60.00
Fast Food	60,160	\$39.00	\$39.00	\$150.00	\$60.00
Large High Rise Office Bldg	1,476,100	\$39.00	\$39.00	\$150.00	\$60.00
Hospital (< 3 MW)	1,509,600	\$39.00	\$39.00	\$150.00	\$60.00
Supermarket	233,600	\$39.00	\$39.00	\$150.00	\$60.00
Convenience Store	20,160	\$39.00	\$39.00	\$120.96	\$60.00
Hospital (> 3 MW)	2,700,000	\$500.00	\$500.00	\$1,900.00	\$1,000.00
Copper Mine	72,000,000	\$500.00	\$500.00	\$1,900.00	\$1,000.00

Table 6
REST Program Budget Proposals

<u>Budget Components</u>	<u>Best Value Plan</u>	<u>Full Compliance Plan</u>	<u>Staff Proposed Plan</u>
Purchased Energy			
Above market cost of conventional generation	\$497,303	\$497,303	\$497,303
Other	\$27,000	\$27,000	\$27,000
Subtotal	\$524,303	\$524,303	\$524,303
Customer Sited Distributed Renewable Energy			
Up front payments to customers	\$632,301	\$4,302,555	\$2,796,771
Production based payments to customers	830,156	\$593,728	\$682,303
New Builder Credit Purchase Program	\$75,000	\$75,000	\$75,000
Outreach Efforts	\$300,000	\$400,000	\$400,000
Other	\$210,000	\$265,000	\$265,000
Subtotal	\$2,047,456	\$5,636,283	\$4,219,074

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Customer Care and Billing Program	\$50,000	\$50,000	\$50,000
Energy Management System and Energy Accounting and Settlements	\$125,000	\$125,000	\$125,000
Net Metering	\$14,000	\$24,000	\$24,000
Reporting	\$60,500	\$60,500	\$60,500
Support provided to University research projects	\$20,000	\$20,000	\$20,000
Other Outside Coordination and Training	\$20,000	\$20,000	\$20,000
Total Program Budget	\$2,861,259	\$6,460,085	\$5,042,877

C. New Builder Credit Purchase Program

14. UNS is proposing a new program that would provide the opportunity to install photovoltaics or solar thermal equipment in conjunction with its Energy Smart Home program. Energy Smart is an existing demand-side management program that encourages the construction of energy-efficient new homes. The Builder Credit Purchase Program would not change any aspect of the Energy Smart Home program, but would provide an additional incentive of \$0.50 per DC watt installed for photovoltaics for projects up to 7 kW. UNS is proposing a budget of \$75,000 for the first year for the new program, with all budget funds going toward the incentive payments.

15. Staff believes that UNS' proposal may assist in furthering solar installations in new construction and recommends that the New Builder Credit Purchase Program be approved for two years on a pilot basis. However, Staff believes that the 7 kW level for reducing incentives proposed by UNS is by nature arbitrary and could artificially reduce the size of solar installations on new home construction. Staff therefore recommends against adoption of the 7 kW level for reducing incentives under this pilot program.

D. Research and Development Funding

16. UNS is proposing funding at the \$20,000 per year level for research and development efforts. The research and development funds would be directed to the Arizona Research Institute for Solar Energy ("AzRISE") at the University of Arizona. AzRISE is an institute involving academic and industry partners involved in research and development, economic and public policy analysis, and education. The funding from UNS, in coordination with funding from Tucson Electric Power Company, would fund three research projects at AzRISE, listed below:

- Testing of solar module and inverter performance in the hot Southwestern climate at the TEP Solar Test Yard
- Solon single-axis tracking system
- Test and conduct research on a fully integrated solar demonstration site for generation of distributed solar power that includes solar electric generation, energy storage and grid connection, integrated with agriculture and biofuels production, and economic analysis

17. Staff believes that some level of research and development efforts is a reasonable part of UNS' REST activities, but that such efforts should be directed toward specific activities which will help UNS' efforts to successfully deploy renewable energy technologies through its REST tariff. Staff believes that the funding and projects proposed by UNS meet these objectives, but that such R&D funding should only be approved for specific projects and specific amounts on a yearly basis, and that UNS should justify future funding of R&D through the REST program. Staff recommends approval of funding in the amount of \$4,545 for the solar module and inverter performance testing project, \$2,727 for the Solon single-axis project, and \$12,727 for the solar demonstration site project for 2009. Staff further recommends that in future annual filings for approval of UNS' REST Implementation Plan that UNS document its research and development spending and report how its research and development activities have helped further its REST efforts.

E. Renewable Energy Credit Purchase Program

18. Staff notes that the work of the Uniform Credit Purchase Program ("UCPP") Working Group, which commenced in 2006, needs to be completed prior to development of reasonable uniform incentives for each renewable generation technology. Staff anticipates that the work of the UCPP Working Group should be completed in 2009. Staff has recommended that if the Commission approves a UCPP, UNS should be required to develop a mechanism to incorporate UCPP procedures and incentive levels for all eligible technologies in its proposed REST Plan for 2010 and later years. To the extent that UNS feels that different incentive levels than those of the UCPP program are justified, UNS could develop such proposals. The credit levels for the Renewable Energy Credit Purchase Program for each of the three proposed plans are

identified in the discussion of each plan above. UNS has indicated that it expects approximately 50 installations averaging approximately 8 kW each in 2009 as a result of this program.

F. UNS REST Experience Under 2008 REST Plan

19. The Commission-approved implementation plan for 2008 contemplated a budget of \$3.15 million. For the June – December period after Commission approval of the 2008 plan, this would be approximately \$1.8 million. UNS projects actual spending of \$0.7 million. Of the remaining \$1.1 million, approximately \$0.7 million is reflected in reservations for future installations. The remaining funds collected in 2008 will be carried over into the next year. Regarding installations and reservations, the table below summarizes installations through October 2008 and reservations for future installations.

Residential	Photovoltaics		Wind		Solar Hot Water
	Number of Systems	kW	Number of Systems	kW	Number of Systems
2008 installations	6	58	11	20	8
Reservations	33	273	22	45	21

Meeting UNS' REST Requirements for 2008

	Required (MWH)	Produced/Banked (MWH)
Residential DG	901	749
Commercial DG	901	22.4
Non-DG	16,226	16,226

UNS did not report any commercial installations or reservations to date. Regarding reservations, UNS has indicated that residential reservations are firm commitments. Commercial reservations represent projects over a longer timeframe, with projects in the early stages being less firm and projects in the latter stages representing firm commitments.

UNS has used a variety of methods to reach out to its customers regarding its renewable energy efforts. These methods include participation in a number of fairs, tradeshow, and festivals,

1 advertising via bill inserts, various brochures, and television and radio ads. Further outreach
2 efforts included advertisements in newspapers and trade publications, web content on the UNS
3 website, internet website sponsorships, and newsletters. UNS has indicated that it is considering
4 additional opportunities to further reach out and educate its customers regarding renewable energy.

5 **G. REST Adjustor Mechanism**

6 20. The Commission established a REST adjustor mechanism for UNS in Decision No.
7 70360 (May 28, 2008). The REST adjustor rate is reset as part of the approval of each year's new
8 REST implementation plan.

9 **H. Staff Recommendations**

10 21. Staff has recommended that the Staff Proposed Plan be approved. This plan
11 includes a funding level of \$5.0 million, a photovoltaic credit of \$3.00 per Watt. This plan also
12 includes a solar water heating up front credit of \$750 plus \$0.25 per Watt up to \$1,750.

13 22. Staff has recommended that a REST Tariff be approved that includes the rate of
14 \$0.006 per kWh and monthly caps of \$4.00 for residential customers, \$60.00 for commercial
15 customers and \$1000.00 for industrial customers.

16 23. Staff has recommended approval of UNS' proposed Builder Credit Purchase
17 Program for a two-year pilot period. Staff has also recommended that the 7 kW level proposed by
18 UNS for reducing incentive levels be rejected.

19 24. Staff has recommended approval of funding in the amount of \$4,545 for the solar
20 module and inverter performance testing project, \$2,727 for the Solon single-axis project, and
21 \$12,727 for the solar demonstration site project for 2009. Staff has also recommended that UNS
22 report in future annual REST filings regarding how past research and development funding has
23 helped further UNS' REST efforts.

24 25. Staff has recommended that UNS make a compliance filing within 15 days of the
25 effective date of the Commission Decision in this case. This filing should include a revised UNS
26 2009 Renewable Energy Standard Implementation Plan and REST Tariff, consistent with the
27 Decision.

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1 26. Staff has recommended that UNS revise its Renewable Energy Credit Purchase
2 Program literature and enrollment form to be consistent with this decision and in a form acceptable
3 to Staff.

4 27. Staff has recommended that the proposed 2009 Renewable Energy Standard
5 Implementation Plan and REST Tariff remain in effect until further order of the Commission.

6 CONCLUSIONS OF LAW

7 1. UNS is an Arizona public service corporation within the meaning of Article XV,
8 Section 2, of the Arizona Constitution.

9 2. The Commission has jurisdiction over UNS and over the subject matter of the
10 application.

11 3. The Commission, having reviewed the application and Staff's Memorandum dated
12 November 26, 2008, concludes that it is in the public interest to approve the 2009 Renewable
13 Energy Standard Implementation Plan and REST Tariff, as modified by Staff.

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ORDER

IT IS THEREFORE ORDERED that the Staff Proposed Plan as outlined in Findings of Fact Nos. 21, 22, 23, 24, 25, 26, and 27 be and hereby is approved.

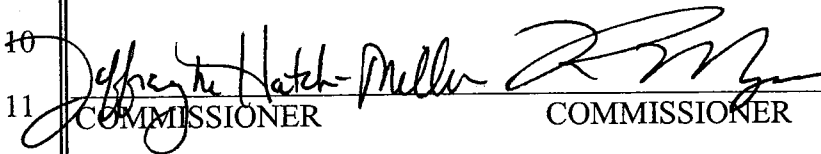
IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION



CHAIRMAN

COMMISSIONER



COMMISSIONER

COMMISSIONER

COMMISSIONER

IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this 18th day of December, 2008.


BRIAN C. McNEIL
EXECUTIVE DIRECTORDISSENT: DISSENT: 

EGJ:RGG:llm/RM

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A Written Dissent From
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Will Follow